

Serial No. 09/035,708

**Amendments to the Claims**

Please amend the claims as follows:

Claims 1-13 (canceled).

Claim <sup>1</sup>14 (currently amended): A method of determining the presence and extent of axonal damage in the head of a patient suspected of having suffered a neurologic trauma selected from acute cerebral vascular accident, ~~primary neuronal injuries~~, primary hemorrhages, or primary vascular injuries ~~or secondary traumatic lesions~~, said method comprising the steps:

- (a) obtaining a sample of cerebrospinal fluid from said patient;
- (b) treating said sample of cerebrospinal fluid with at least one monoclonal antibody, said at least one monoclonal antibody having been raised against an axonally-derived tau protein of SEQ ID NO:1;
- (c) detecting the presence of said axonally-derived tau protein bound to said at least one monoclonal antibody; and
- (d) comparing the amount of said axonally-derived tau protein bound to said at least one monoclonal antibody in step (c) to control samples from the group representing a normal undamaged axon state and those representing an axonal damage state.

Claims 15-16 (canceled).

Claim <sup>2</sup>17 (previously presented): A method according to Claim <sup>1</sup>14 wherein said axonally-derived tau protein is a fragment of said tau protein of SEQ ID NO:1 demonstrating an apparent molecular weight in the range of 30 kDa to 50 kDa.

Claim 18 (canceled).

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Claim <sup>3</sup>19 (previously presented): A method according to Claim <sup>2</sup>~~17~~ wherein said axonally-derived protein comprises the sequence from serine<sup>199</sup> to serine<sup>396</sup> of tau protein of SEQ ID NO: 1.

Claim 20 (canceled).

Claims 21-22 (canceled).

Claim <sup>4</sup>23 (original): A method according to Claim <sup>1</sup>~~14~~ wherein said presence of said axonally-derived protein bound to said at least one monoclonal antibody is detected through gel electrophoresis.

Claim <sup>5</sup>24 (previously presented): A method according to Claim <sup>14</sup>~~23~~ wherein said axonally-derived tau protein bound to said at least one monoclonal antibody is a fragment of tau protein SEQ ID NO:1 which is detected through gel electrophoresis and which gives rise to an electrophoresis gel demonstrating multiple protein bands with apparent molecular weights from 30 kDa to 50 kDa.

Claim 25 (canceled).

Claim <sup>6</sup>26 (original): A method according to Claim <sup>1</sup>~~14~~ further comprising the measurement of said axonally derived proteins in said cerebrospinal fluid by an ELISA technique.

Claim <sup>7</sup>27 (previously presented): The method of Claim <sup>6</sup>~~26~~ wherein the ELISA employs monoclonal antibodies recognizing tau protein of SEQ ID NO: 1 present in human cerebrospinal fluid.

Claim 28 (canceled).

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<sup>8</sup>  
Claim ~~29~~<sup>26</sup> (original): The method of Claim ~~26~~<sup>26</sup> wherein said ELISA is a tau sandwich ELISA.

Claims 30-31 (canceled).

<sup>A</sup>  
Claim ~~32~~ (previously presented): A method of determining the presence and extent of axonal damage in the head of a patient suspected of having an acute cerebrovascular accident, said method comprising the steps of:

- (e) obtaining a sample of cerebrospinal fluid from said patient;
- (f) treating said sample of cerebrospinal fluid with at least one monoclonal antibody, said at least one monoclonal antibody having been raised against an axonally-derived tau protein of SEQ ID NO:1;
- (g) detecting the presence of said axonally-derived tau protein bound to said at least one monoclonal antibody; and

comparing the amount of said axonally-derived tau protein bound to said at least one monoclonal antibody in step (c) to control samples from the group representing a normal undamaged axon state and those representing an axonal damage state.

Claim 33 (canceled).